**There are three ways of working with MySQl and PHP**

1. MySQLi (object-oriented)
2. MySQLi (procedural)
3. PDO

**Connecting to MySQL database using PHP**  
There are 3 ways in which we can connect to MySQl from PHP as listed above and described below:

* **Using MySQLi object-oriented procedure**: We can use the MySQLi object-oriented procedure to establish a connection to MySQL database from a PHP script.

**Syntax**:

<?php

$servername = "localhost";

$username = "username";

$password = "password";

**// Creating connection**

$conn = new mysqli($servername, $username, $password);

**// Checking connection**

if ($conn->connect\_error)

{

die("Connection failed: " . $conn->connect\_error);

}

echo "Connected successfully";

?>

* **Using MySQLi procedural procedure** : There is also a procedural approach of MySQLi to establish a connection to MySQL database from a PHP script as described below.

**Syntax:**

<?php

$servername = "localhost";

$username = "username";

$password = "password";

**// Creating connection**

$conn = mysqli\_connect($servername, $username, $password);

**// Checking connection**

if (!$conn) {

die("Connection failed: " . mysqli\_connect\_error());

}

echo "Connected successfully";

?>

**Using PDO procedure**: PDO stands for PHP Data Objects. That is, in this method we connect to the database using data objects in PHP as described below:

**Syntax:**

<?php

$servername = "localhost";

$username = "username";

$password = "password";

try {

$conn = new PDO("mysql:host=$servername;dbname=myDB", $username, $password);

**// setting the PDO error mode to exception**

$conn->setAttribute(PDO::ATTR\_ERRMODE, PDO::ERRMODE\_EXCEPTION);

echo "Connected successfully";

}

catch(PDOException $e)

{

echo "Connection failed: " . $e->getMessage();

}

?>

**Explanation:**The exception class in PDO is used to handle any problems that may occur in our database queries. If an exception is thrown within the try{ } block, the script stops executing and flows directly to the first catch(){ } block.

**Closing A Connection**

When we establish a connection to MySQL database from a PHP script , we should also disconnect or close the connection when our work is finished. Here we have described the syntax of closing the connection to a MySQL database in all 3 methods described above. We have assumed that the reference to the connection is stored in $conn variable.

**Using MySQLi object oriented procedure** 

**Syntax**

$conn->close();

**Using MySQLi procedural procedure** 

**Syntax**

mysqli\_close($conn);

**Using PDO procedure** 

**Syntax**

$conn = null;

**PHP mysqli\_connect() Function**

The *mysqli\_connect()* function in PHP is used to connect you to the database.

**Syntax:** 

mysqli\_connect( "host", "username", "password", "database\_name" )

**Parameters used:** 

* ***host*:**It is optional and it specify the host name or IP address. In case of local server localhost is used as a general keyword to connect local server and run the program.
* ***username*:**It is optional and it specify mysql username. In local server username is *root.*
* ***Password*:**It is optional and it specify mysql password.
* ***database\_name*:**It is database name where operation perform on data. It also optional.

**Return values:** 

* It returns an object which represent MySql connection. If connection failed then it return FALSE.

**SELECT Query using Procedural Method :**

**php script to retrieve the data from database**

**showrecord.html**

<!DOCTYPE html>

<html>

<body>

<div class="title">

<h2>Emp record From Database Using PHP.</h2>

</div>

<form action="http://localhost/san/emprecord.php" method="post">

<h2>Employee Record Details</h2>

<input class="submit" name="submit" type="submit" value="Show Record">

</form>

</body>

</html>

**emprecord.php**

<!DOCTYPE html>

<html>

<body>

<?php

$servername = "localhost";

$username = "root";

$password = "";

$dbname = "mydb";

// Create connection

$conn = mysqli\_connect($servername, $username, $password, $dbname);

// Check connection

if (!$conn)

{

die("Connection failed: " . mysqli\_connect\_error());

}

$sql = "SELECT \* FROM emp";

$result = mysqli\_query($conn, $sql);

if (mysqli\_num\_rows($result) > 0)

{

echo "<table border=1>";

echo "<tr>";

echo "<th>NAME</th>";

echo "<th>CODE</th>";

echo "<th>DESIGNATION</th>";

echo "<th>SALARY</th>";

echo "</tr>";

while ($row = mysqli\_fetch\_array($result))

{

echo "<tr>";

echo "<td>".$row['name']."</td>";

echo "<td>".$row['code']."</td>";

echo "<td>".$row['desig']."</td>";

echo "<td>".$row['salary']."</td>";

echo "</tr>";

}

echo "</table>";

mysqli\_free\_result($result); // close the resultset.

}

else {

echo "No matching records are found.";

}

mysqli\_close($conn);

?>

</body>

</html>

# PHP mysqli\_num\_rows() Function

# The mysqli\_num\_rows() function is an inbuilt function in PHP which is used to return the number of rows present in the result set. It is generally used to check if data is present in the database or not. To use this function, it is mandatory to first set up the connection with the MySQL database.

# PHP mysqli\_free\_result() Function

mysqli\_free\_result()function frees the memory associated with the result.

## **Syntax**

mysqli\_free\_result(result);

# PHP mysqli\_fetch\_array() Function

# The **mysqli\_fetch\_array() function** is used to fetch rows from the database and store them as an array. The array can be fetched as an associative array, as a numeric array or both.

while ($row = mysqli\_fetch\_array($result))

{

echo "<tr>";

**echo "<td>".$row['name']."</td>";**

**echo "<td>".$row['code']."</td>";**

**echo "<td>".$row['desig']."</td>";**

**echo "<td>".$row['salary']."</td>";**

echo "</tr>";

}

while ($row = mysqli\_fetch\_array($result))

{

echo "<tr>";

**echo "<td>".$row[0]."</td>";**

**echo "<td>".$row[1]."</td>";**

**echo "<td>".$row[2]."</td>";**

**echo "<td>".$row[3]."</td>";**

echo "</tr>";

}

**SELECT Query using Object Oriented Method :**

<!DOCTYPE html>

<html>

<body>

<?php

$servername = "localhost";

$username = "root";

$password = "";

$dbname = "mydb";

// Create connection

$conn =new mysqli($servername, $username, $password, $dbname);

// Check connection

if ($conn->connect\_error)

{

die("Connection failed: " . $conn->connect\_error);

}

$sql = "SELECT \* FROM emp";

$result = $conn->query($sql);

if ($result->num\_rows> 0)

{

echo "<table border=1>";

echo "<tr>";

echo "<th>NAME</th>";

echo "<th>CODE</th>";

echo "<th>DESIGNATION</th>";

echo "<th>SALARY</th>";

echo "</tr>";

while ($row =$result->fetch\_array())

{

echo "<tr>";

echo "<td>".$row[0]."</td>";

echo "<td>".$row[1]."</td>";

echo "<td>".$row[2]."</td>";

echo "<td>".$row[3]."</td>";

echo "</tr>";

}

echo "</table>";

$result->free(); // close the resultset.

}

else {

echo "No matching records are found.";

}

$conn->close();

?>

</body>

</html>

# PHP mysqlifetch\_assoc() Function

mysqli\_fetch\_assoc() function fetches a result row as an associative array.

**Note:** Fieldnames returned from this function are case-sensitive.

## **Syntax**

#### **Object oriented style:**

$mysqli\_result ->fetch\_assoc()

#### **Procedural style:**

mysqli\_fetch\_assoc(result)

while ($row = mysqli\_fetch\_array($result))

{

echo "<tr>";

echo "<td>".$row['name']."</td>";

echo "<td>".$row['code']."</td>";

echo "<td>".$row['desig']."</td>";

echo "<td>".$row['salary']."</td>";

echo "</tr>";

}

Insert Record into database

Formdata.html

<!DOCTYPE html>

<html>

<head>

<title>PHP insertion</title>

<body>

<div class="title">

<h2>Insert Data In Database Using PHP.</h2>

</div>

<form action="http://localhost/san/insertrecord.php" method="post">

<h2>Form</h2>

<label>NAME:</label>

<input class="input" name="nm" type="text" value="">

<label>CODE:</label>

<input class="input" name="cd" type="text" value="">

<label>DESIGNATION:</label>

<input class="input" name="ds" type="text" value="">

<label>SALARY:</label>

<input class="input" name="sal" type="text" value="">

<input class="submit" name="submit" type="submit" value="Insert">

</form>

</body>

</html>

insertrecord.php

<!DOCTYPE html>

<html>

<body>

<?php

if(isset($\_POST['submit']))

{

$ename = $\_POST['nm'];

$ecode = $\_POST['cd'];

$edesig = $\_POST['ds'];

$esal = $\_POST['sal'];

$servername = "localhost";

$username = "root";

$password = "";

$dbname = "mydb";

//create connection

$conn = mysqli\_connect($servername, $username, $password, $dbname);

// Check connection

if (!$conn)

{

die("Connection failed: " . mysqli\_connect\_error());

}

$sql = "INSERT INTO emp VALUES ('$ename','$ecode','$edesig','$esal')";

if (mysqli\_query($conn, $sql)) {

echo "New record created successfully";

} else {

echo "Error: " . $sql . "<br>" . mysqli\_error($conn);

}

mysqli\_close($conn);

}

?>

</body>

</html>

Update Record into database

Search.html

<!DOCTYPE html>

<html>

<head>

<title>PHP insertion</title>

<body>

<div class="title">

<h2>Search Data In Database Using PHP.</h2>

</div>

<form action="http://localhost/san/update.php" method="post">

<h2>Form</h2>

<label>Enter Code:</label>

<input class="input" name="cd" type="text" value="">

<input class="submit" name="submit" type="submit" value="search">

</form>

</body>

</html>

**Update.php**

<!DOCTYPE html>

<html>

<body>

<?php

if(isset($\_POST['submit']))

{

$ecode = $\_POST['cd'];

$servername = "localhost";

$username = "root";

$password = "";

$dbname = "mydb";

//create connection

$conn = mysqli\_connect($servername, $username, $password, $dbname);

// Check connection

if (!$conn)

{

die("Connection failed: " . mysqli\_connect\_error());

}

$sql="UPDATE emp SET salary=salary+5001 WHERE code='$ecode'";

if (mysqli\_query($conn, $sql))

{

echo "Record update successfully";

}

else

{

echo "Error: " . $sql . "<br>" . mysqli\_error($conn);

}

mysqli\_close($conn);

}

?>

</body>

</html>

Delete Record form database

<!DOCTYPE html>

<html>

<body>

<div class="title">

<h2>Search Data In Database Using PHP.</h2>

</div>

<form action="http://localhost/san/delete.php" method="post">

<h2>Form</h2>

<label>Enter Code:</label>

<input class="input" name="cd" type="text" value="">

<input class="submit" name="submit" type="submit" value="delete">

</form>

</body>

</html>

**Delete.php**

<!DOCTYPE html>

<html>

<body>

<?php

if(isset($\_POST['submit']))

{

$ecode = $\_POST['cd'];

$servername = "localhost";

$username = "root";

$password = "";

$dbname = "mydb";

//create connection

$conn = mysqli\_connect($servername, $username, $password, $dbname);

// Check connection

if (!$conn)

{

die("Connection failed: " . mysqli\_connect\_error());

}

$sql="delete from emp WHERE code='$ecode'";

if (mysqli\_query($conn, $sql))

{

echo "Record deleted successfully";

}

else

{

echo "Error: " . $sql . "<br>" . mysqli\_error($conn);

}

mysqli\_close($conn);

}

?>

</body>

</html>